

IN THE CLAIMS

Please amend Claims 8, 9, 16, 18, 20 and 21 as follows:

8. (Amended) [The catheter of claim 7,] A catheter comprising:
an elongate catheter body,
a cooling chamber defined within the catheter body,
an expandable member disposed around the cooling chamber to define an interstitial
space therebetween;
wherein the cooling chamber is a first expandable membrane inflatable from a first state
to a second state;
wherein the catheter body further comprises a coolant injection tube in fluid
communication with:
 - (i) a source of coolant, and
 - (ii) the cooling chamber,and wherein the cooling chamber is inflatable by the flow of coolant from the injection tube into
the first expandable membrane;
wherein the catheter body further comprises a primary coolant return lumen in fluid
communication with:
 - (i) a source of fluid evacuation, and
 - (ii) the cooling chamber,and wherein the coolant injection tube, the cooling chamber, and the primary coolant return
lumen define a first fluid pathway for the flow of coolant; and
wherein the catheter body further comprises a secondary coolant return lumen in fluid
communication with:
 - (i) a source of fluid evacuation, and
 - (ii) the interstitial space,and wherein the interstitial space and the secondary coolant return lumen define a second fluid
pathway for the flow of coolant.

9. (Amended) The catheter of claim [3] 8, wherein the cooling chamber has an outer surface and the expandable member has an inner surface, said surfaces being substantially in apposition to one another to define a first volume of the interstitial space.
16. (Amended) The catheter of claim [3] 8, further comprising a flexible structure disposed within the interstitial space and around the cooling chamber.
18. (Amended) The catheter of claim [16] 17, wherein the flexible structure further comprises at least one flexible elongate element wound in a second direction of rotation around the cooling chamber.
20. (Amended) The catheter of claim [1] 8, further comprising at least one temperature sensor disposed within the cooling chamber.
21. (Amended) The catheter of claim [1] 8, further comprising at least one pressure sensor disposed with the cooling chamber.

Please cancel Claims 1-7 without prejudice and without disclaimer of subject matter.

CLEAN CLAIMS

31
1.8. (Amended) A catheter comprising:

an elongate catheter body,
a cooling chamber defined within the catheter body,
an expandable member disposed around the cooling chamber to define an interstitial space therebetween;

wherein the cooling chamber is a first expandable membrane inflatable from a first state to a second state;

wherein the catheter body further comprises a coolant injection tube in fluid communication with:

- (i) a source of coolant, and
- (ii) the cooling chamber,

and wherein the cooling chamber is inflatable by the flow of coolant from the injection tube into the first expandable membrane;

wherein the catheter body further comprises a primary coolant return lumen in fluid communication with:

- (i) a source of fluid evacuation, and
- (ii) the cooling chamber,

and wherein the coolant injection tube, the cooling chamber, and the primary coolant return lumen define a first fluid pathway for the flow of coolant; and

wherein the catheter body further comprises a secondary coolant return lumen in fluid communication with:

- (i) a source of fluid evacuation, and
- (ii) the interstitial space,

and wherein the interstitial space and the secondary coolant return lumen define a second fluid pathway for the flow of coolant.

✓
9. (Amended) The catheter of claim 8, wherein the cooling chamber has an outer surface and the expandable member has an inner surface, said surfaces being substantially in apposition to one another to define a first volume of the interstitial space.

B2 9 16. (Amended) The catheter of claim 8, further comprising a flexible structure disposed within the interstitial space and around the cooling chamber.

B3 11 18. (Amended) The catheter of claim 10, wherein the flexible structure further comprises at least one flexible elongate element wound in a second direction of rotation around the cooling chamber.

B4 17 20. (Amended) The catheter of claim 8, further comprising at least one temperature sensor disposed within the cooling chamber.

14 21. (Amended) The catheter of claim 8, further comprising at least one pressure sensor disposed with the cooling chamber.
